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Agricultural Education

BEFORE

AFTER

Home Beautification Demonstrated by Homestead, Florida, F. F. A. Chapter

(See page 75)

Annual Meeting (see page 80)
American Vocational Association
December 2-5, 1936
Agricultural Education Headquarters
Plaza Hotel, San Antonio, Texas

EDITORIAL COMMENT

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PLANNING

HOW many people do you know, even farmers, who would attempt to build a house without first planning it? Would any of them go to the mill, haul two loads of lumber, nail it up and then haul again, nail again, haul again, and so forth, until the house is finished?

Should this have any significance for workers in agricultural education? How may we apply this to our school, community, county, state, and nation? Some departments of vocational agriculture show a well planned program—others an utter lack of planning. The following procedure in planning a program is offered in the hopes that some teacher will be encouraged to think out this problem for himself and to do a thoro job of planning his house for this and future years, rather than follow the plan of hauling a load, nailing a load, and so on.

Before much planning can be done, a teacher should know a great deal about the life, habits, soil conditions, animal needs, sanitation, and living conditions of his community. One workable means of getting much of this information is thru a well planned and executed survey. Certainly no survey can be planned to meet the needs of all our communities. This simply means each teacher should plan his own survey, study it, and be sure it is a worth-while effort before going to his farmers with it. The group surveyed should include the farms of pupils in all classes and then as many additional farms in the community as are needed to get a cross section.

Following the survey, an analysis must be made and a long-time program developed. In this we have our house foundation. From here it would seem sensible to add the greater needs to our building. Are we likely to attempt too many jobs in the first year of our building? Perhaps more programs have failed because of too many rather than too few undertakings that were followed to completion.

Our building plans, however, might surely include plans for all-day teaching, supervised and supplementary supervised practices for the boys' entire time in our classes, placement and follow-up of our boys when they have left our classes, and a like plan for part time and evening membership where applicable.

What finer job could our F.F.A.'s assist in than helping to plan and execute a long-time agricultural program in our communities? All this is possible to the teacher with vision, who is willing to study and plan; then when his specifications are satisfactory, the building can be executed.

Our vocational program should be a big building, carefully planned, built slowly but solidly—and in the end a real monument will have been erected.—G. T. S.

PARTICIPATION AND TEACHER EDUCATION

PROFESSOR R. M. STEWART, Agricultural Education, Cornell University, Ithaca, New York

THE first sentence in the August number of this magazine reads: *Supervised or directed practice in farming is the core of vocational agricultural training whether we are thinking of all-day, part-time, or evening-school students.* It is necessary to keep reminding ourselves that supervised participation in the responsibilities of teaching is the core of professional agricultural education on any level of teaching in which we engage. It is an uneconomical business and an unnecessary exploitation of youth if our candidate teachers are not proficient in teaching. In the latter case we are involving the welfare of human beings; in the former, economic returns primarily.

That teacher training itself was a matter of paramount importance back in 1917 when our earlier leaders were struggling with a program and policy for vocational education is clear. The Federal Board of that day said, "The heart of the problem of vocational education in agriculture is the teacher." There was made a specific emphasis upon training in four fields: studies in agriculture, studies in scientific implications of agriculture, studies in the social implications of agricultural education, and, then, of course, in the professional. Under the professional three types are specified: making the course of study in agriculture, the teaching process in the job of the teacher of agriculture, and educational psychology.

In this brief statement it is my purpose to bring out into relief the factor of *participation* in the making of a proficient teacher and to call attention to its place in the program of teacher education. Logically, it is embraced, as you already note under the *teaching process in the job of the teacher of agriculture*. "Supervised observation and practice teaching . . . must approximate in motivated activity and in environment vocational teaching in the high school. The implication here is that the teacher-training institution must direct the work of the students in a representative high school or group of high schools in which several types of state-approved organizations are to be found." "The total period of participation will be the sum of the units necessary to provide an adequate representative experience of the several forms of the teacher's work." It is clear that this places observation and teaching under supervision as the *central emphasis* of the professional side of a teacher's preparation.

In order that you may be clear as to what I have in mind as to the general nature of the teacher's responsibilities for which participative experience may well be needed, I am suggesting the following as typical: administrative experiences with school authorities, discovering the human resources of the area, organizing them into groups for instruction, providing equipment and other teaching facilities, teaching in the classroom work and supervising pupils' practice programs, surveying and evaluating agricultural resources, constructing curriculums and courses of study, participating in community activities, co-operating with commercial agencies, and providing for their own professional growth. It is clear that these types of participative experiences cut across not only the entire professional program but all other fields.

Not all of such responsibilities can be provided for during the "pre-employment" training, but most of them, if not all, should be begun then. The type of problems more appropriate for learning "in service" would be "those that call largely for utilizing the various business, civic, and social agencies in the community." This involves a program of itinerant teacher training tied up closely with the resident, pre-employment training. In the development of a program of teacher training, therefore, we have been coming to a clearer conception of aims and objectives, to a greater emphasis upon professionalizing teacher training as well as teaching, to a recognition of a need for varied facilities for the execution of effective teacher training programs within the states, and to greater care in the selection of desirable candidates and in the elimination of undesirable or unprepared people. This calls for increased support, better staffs, higher certif-

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Professional

Whither Agricultural Education — in Supervised Farm Practice?

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Early Stages of Supervised Practice

NEARLY two decades have passed since the Federal government first appropriated funds for the teaching of vocational agriculture of less than college grade in the rural high schools of the United States. Twenty years is a comparatively short period in an epoch of education. However, we are living in a time of rapid change in our thinking and our planning. It is therefore appropriate at this time to give some consideration to an evaluation of our agricultural program, particularly the new aspect of agricultural education during this period, namely, supervised farm practice.

Previous to 1917 our agricultural program was made up largely of formal courses of instruction with little thought given to the application of knowledge. These courses in agricultural instruction in the high schools were abstract with no particular relation to the boy's home environment. Our facilities both for training teachers and farmers during this early period were inadequate.

Doctor Kruse in an earlier article in this series has pointed out that "traditionally the schools have tended to stress most the acquisition of knowledge, next the acquisition of skills, and least the development of attitudes." He would stress these points in the following order: first, the cultivation of attitudes; second, the acquisition of skills with possibly less emphasis on the accumulation of mere knowledge. This state of affairs applied particularly to agricultural education in its earlier stages.

The deficiencies of our earlier types of agricultural education were recognized by local and state school organizations. Such states as Massachusetts, New York, New Jersey, and Pennsylvania set up legislative provisions to make it possible for participation in farming activities as an essential part of the training program for farmers. The feeling of need for this new phase of agricultural education grew thruout the country and was finally manifest in a national way in the passage of the Smith-Hughes Act in 1917.

Supervised Practice and the Activity Program

The primary aim in the Smith-Hughes Act so far as agriculture is concerned is: *to train present and prospective farmers for proficiency in farming.* This aim, with its accompanying objectives, is far reaching in the realm of rural education. The vital element in the federal program is "that schools shall provide for directed or supervised practice in agriculture, either on a farm provided for by the school or other farms, for at least six months per year." This provision in the Act to provide an instructional and supervisory power outside the four walls of the school was new in education and soon spread to the several states. It involved a shift of emphasis from the traditional method of organized classroom courses to a more natural environment for the learner. Our methods of complying with this provision of the federal act have been varied. Administrators and teachers in general education have been slow to understand this type of education under the terminology adopted. It was a stranger within our gates. Yet the very essence of the principle of supervised practice known by another name has been advocated for several centuries by leaders in educational thought and practice. As far back as 1762 Rousseau advocated that teachers "do as much as possible of your teaching by *doing*, and fall back on words only when *doing* is out of the question." Over a century ago Pestalozzi in his school set up the principle "the child himself and his personal experience replace books; nature and things replace the symbols of nature and things; and occupation, *activity*, facts replace reasoning and abstractions." Herbart, as early as 1835, belittled our system of departmentalization of knowledge in training children. Later Froebel proclaimed education as *self-activity in a natural environment.* The fundamental principles of Dewey's pragmatism—learn to do by doing—virtually include all these principles in advocating the *doing* side of education.

L. R. Humphreys

All these principles, "*naturalism* from Rousseau; *interest* and *correlation* from Herbart; *self-activity* and *informality* from Froebel; and other vital elements are involved in the so-called activity school of today. All these educational leaders would by their declarations minimize subjects as part of the texts and "institute meaningful, purposeful activities carried to completion in their natural settings." These very factors are contemplated in the provision for supervised practice in vocational agriculture.

Characteristics of Supervised Practice

Directed or supervised practice in agriculture has come to have a broad and far-reaching meaning. It assumes a desirable working relation between the teacher and the learner in farming activities in and outside the classroom. It indicates a willingness and a desire on the part of the teacher and the learner to co-operate in a worthy enterprise. It includes all the elements assigned to the term *project method*—purposeful, wholehearted, self-directed, meaningful activity. In its more desirable form supervised practice includes initiative, creative ability, and a sense of ownership and responsibility and satisfaction which goes with it. More and more this term is assuming the aspect of a co-operative enterprise between the teacher and the learner, between the teacher and the family. In the case of the all-day students it assumes a definite part to be played by the parents or guardian. Indeed, here we have a desirable working relation in the most fundamental unit of society, the *home.*

In the term *supervised practice* we have involved on the one hand the work and qualifications of the local teacher of agriculture. This carries with it a very elaborate program for the proper selection and training of individuals to assume the job of directing the efforts of farmers and future farmers in the rural community. On the other hand, this term carries the thought that the individual learner wants the supervised practice program, needs it, and can profit by it.

Supervised practice then as an essential and integral part of the program of vocational agriculture properly conceived and properly organized includes the following characteristics:

1. It provides for meaningful, purposeful, self-directed activities carried to completion in a natural and desirable environment.
2. It provides a maximum of educative training as a result of a supervised activity.
3. The supervised practice program brings into play a wide variety of types of intellectual and manual activity.

4. The student in supervised practice learns how to learn by virtue of his own initiative and activities. He adopts a definite practice program.
5. The student in supervised practice has a large field for self-expression and secures practice in managerial training, co-operation, initiative, originality, leadership, and community activities.
6. Supervised practice gives rise to or accompanies instruction in the school.
7. The supervised practice program ties up the theoretical with the practical and interprets the findings of science in practical situations.
8. The supervised practice program is a continuous process. It contemplates education and help for the individual thruout his whole life.

Effectiveness of the Supervised Practice Program

How shall we measure the effectiveness of a program of supervised practice? What evidence have we to prove that this program is functioning? Have we trained for proficiency in agriculture? What effect has the supervised practice program in agriculture had on the life of the young farm boy and his community? What is the contrast between the accomplishments of boys and adults with and without a supervised practice program? To what extent are boys following agriculture who are better fitted for other fields of endeavor? If federal funds were discontinued, how many school districts would continue the program? How many boys are struggling in other fields of endeavor who should now be in agriculture? To what extent is the supervised practice program improving current farm practices of the average community? These and many other questions we need to raise concerning the supervised practice aspect of the program in vocational agriculture. Many such questions we will be called upon to answer in the near future.

Unfortunately, at this time we cannot answer many of these questions with any degree of accuracy. Our measuring devices are very crude. The reports which are compiled for the United States Office of Education deal largely with enrollments and the element of finance. It is difficult in this program to measure in a material way the effectiveness of such qualities as co-operation and leadership. There is accumulating evidence among former students of vocational agriculture to show that they are anxious to co-operate, have a pride in adopting the best accepted practices in agriculture, and are assuming leadership in their respective communities. No other educational institution or agency has attempted to go to the farm and the home in such a deliberate, wholehearted way for the improvement of farm and home conditions, for the uplift of community life.

On the whole, the program of supervised practice in vocational agriculture has been well received. This is attested by the rapid increase in enrollment in the several types of agricultural schools thruout the country; by the wholehearted support which is given at the present time by the school administrators, parents, farm organizations, legislative assemblies, and the public generally. The growth in this type of education has been phenomenal. This growth has not taken place without shortcomings and the criticism of prominent educators. We need to develop more efficient techniques in analyzing our problems and evaluating the outcomes of the program.

Difficulties and Shortcomings

A uniform program of training farmers with specific provisions planned by the federal government has been difficult to fit into the program of the average rural high school. The continually increasing number of subjects taught in the high school, the changing type of organization in the secondary school, the variation in the length of the class period, the number of required subjects for graduation from high school, the domination of higher institutions in prescribed college entrance requirements, the variation in the amount of credit given for high school subjects—all these factors are but examples of disturbing elements in various parts of the country in attempting to adopt a uniform plan of setting up a program for teaching vocational agriculture.

Possibly one of the most serious criticisms waged against the program in vocational agriculture has been the point that no program should attempt to take a boy at the age of fourteen years and prepare him for a vocation. The reorganization of our secondary schools in America has been such as to postpone the time for preparation for a life's vocation. The average boy at 14 years is in the middle of a period of school training in which exploration, try-out, and general education values are emphasized. In fact, our social order possibly is such as to justify the delay in the time for specialization. The piling up of the number of unemployed farm youths following the leaving of high school, and the delay among young men in becoming established in the business of farming seem to indicate that there is some virtue in the argument that a boy at 14 years does not know himself well enough to decide what vocation he should choose. To offset this objection is the fact that at 14 years, the average farm boy is working on the farm. He is in a position to "earn while learning," to learn many of the farm skills both operative and managerial. If this be true, then the program of supervised farm practice in agriculture will furnish a service to the boy and his parents that cannot be estimated in dollars and cents. The influence of an optimistic, far-seeing instructor of agriculture, the good habits formed by the boy, the practice in leadership and co-operative effort will contribute to the well-being of the individual boy whether he follows agriculture as a vocation or not. From this angle agriculture presents a different case than does training for other vocations.

The teacher of vocational agriculture holds a key position in a rural high school area. He more than any other school official has his finger on the pulse of the community. He will come to realize that not all people on farms are farmers. He becomes intimately acquainted with the boys and the parents. If the teacher is a student of human nature and has a proper concept of the principles of guidance, he will influence materially the lives of the boys in the local community. He will be the means of discouraging some boys from following agriculture as a vocation. Others thru his influence will follow agriculture as a vocation.

The methods adopted and used by teachers in supervised practice are at great variance in different parts of a state and in different parts of the country. The attitude varies from the spirit of a humble teacher giving guidance to a visiting gossiper; from a teacher who serves in a spirit of humility to a person who "feels his oats"; from a teacher who teaches to a person who tells; from a teacher who uses methods and materials for motivating activity to the person who places the main emphasis on knowledge.

Our supervised practice program with boys and adults has been concerned with too few of the problems of the farm. Quite often the boy selects one of the choice acres of the farm as a project. Too little attention is given by the teacher and student to the farm as a whole. What does it profit a farmer if he keeps clean one acre of the farm and allows the remaining acres to grow weeds or has one cow with high milk production and several boarders, or has 50 hens among others with disease.

So far as I know, there is no comprehensive study available yet to show the mortality in registration in vocational agriculture. It is to be expected that some of the boys who take supervised practice will drop out of agriculture after the first year. In the majority of cases, their lives have been enriched as a result of this experience. It will be unfortunate indeed if the school program is such that the course in vocational agriculture fails to reach the boys who will eventually follow the vocation of farming.

With an ever increasing complexity in our social structure we shall experience greater difficulty in maintaining a balance for the common good. Our wilderness of 200 years ago has grown into the wealthiest and most highly organized urban nation of the world—the most unusual transition in all history. The world marvels at our high technological efficiency, our capacity to produce, and our high standards of living. Yet in the face of all these facts a large percent of our young farm population is having difficulty in securing employment and in becoming established in the farming business and enjoying what is commonly accepted as the American standards of living.

In the brief time of settlement of this country, we have been wasting our land without regard for the next generation. Large areas have been ruined or deteriorated by removing the natural cover and allowing the ravages of erosion to take place and by improper farming practices. To this surface waste should be added the tremendous loss suffered by farmers due to insects, weeds, plant diseases, and rodents. Add to these sums the loss due to the low productivity of the soil because of poor husbandry, and we have an unpleasant picture to behold. All these conditions and others furnish definite evidence of lack of integration of educational forces.

Our philosophy of agricultural education, in the making tho it is, has been good. But our educational program is inadequate to meet our present problem. Our structure is young and weak. It has served us well, but it no longer serves adequately for controls in an ex-

panding program. It must be reformulated out of present farm life situations. We must continually reformulate our objectives in the light of a rapidly changing rural civilization. We must re-evaluate the results of our efforts in terms of what seem to be the apparent needs of a rural society.

Needs in Supervised Practice

We need to integrate our efforts, encourage and intensify research, and increase the data on what constitutes an adequate preparation and training program for farmers. At the present time we are not in a position to say precisely what is the most satisfactory method of training farmers.

Our program of supervised practice must follow the boy well into adult period and give him help in terms of his own environment and in terms of the whole community.

Supervised practice must recognize that the farmer is not only a tiller of the soil but a member of society. More emphasis therefore must be given to activities involving changing social and economic conditions, to leadership and cooperative effort, and to the development of the whole community.

Boys and adult farmers must be given greater opportunity to share in the formulation and administration of a supervised practice program which affects their future life.

A more effective mutual understanding must be reached between workers in the fields of general and vocational education, between the schools and the employing world, between parent and school officials. In this enterprise, the school administrator and the teacher, the employer, the employee, and the parent have a definite part to play.

The program in supervised practice must utilize more efficiently all agencies concerned with farming as a vocation.

More emphasis must be given to the supervised practice factor in the training of teachers.

More emphasis must be given to a long-time program.

Participation and Teacher Education

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icate standards, greater selectivity of applicants, more intelligent placement, and a continuous professional program for "pre-employment" and "in-service" groups.

It is particularly timely to call attention to the teacher-training problem since the Congress of the United States has given approval to our advancing program in the passage of the George-Deen Act whereby our teacher-training facilities may well be improved as well as augmented. It seems to me that we have a challenge that we cannot afford to default. At this same time also, we have another problem that will concern us more and more, namely, the recognition of a fifth year as basic training for high grade performance.

In the remaining part of this discussion, I shall direct your attention to four aspects of the participative emphasis in teacher training, all of which are essential to any on-going program of professional teaching. They are:

1. Observation and conference
2. Directed teaching in typical, high school, and community situations
3. Apprentice teaching in typical, high school, and community situations
4. Itinerant teacher training in full employment situations.

1. *Observation and Conference*

Observation has been an old form of teacher training. It had grown to be faulty when directed teaching and itinerant teacher training were being substituted for it. With increased eligibles for training came the difficult problem of supplying adequate facilities for teaching. Observation, which was the first step in participative experience, is being re-examined and reconstructed. In fact, it is with us as the effective approach to a candidate's induction into teaching. The character of such satisfactory approach is something as follows:

(1) Observation must have purpose and plan. When a candidate enters upon a program of training, he should see it in "bird's-eye view" as a whole. The place of the observation is integral tho specific. The first observation would normally be the candidate's opportunity to see a vocational department functioning at its best. A pre-arranged form for observation would prevent hit-and-miss looking about. It would facilitate concentration and provide facts to be regarded later.

(2) The second and the third and the rest would be cumulative; that is, they would show a developing plan thruout the entire system.

(3) The school settings for the observations would be the actual school situations—typical teaching, but the teacher trainer would know what was to be expected as a basis of his question outline.

(4) Standards would be set and responsibilities would be assigned to the group in the interest of satisfactory outcomes.

(5) Each observation will be followed by a conference. Tho the original group observing should be relatively small, the conferences should be held with even smaller groups; occasionally they should be individual and personal.

(6) The observation and the conference become essential in the plan of selecting candidates for directed teaching. This is where elimination from candidacy for teaching should take place for the last time, except in rare cases.

2. *Directed Teaching in Typical Situations*

If a good program of observation—supervised and concluded with a conference—is carried on, the launching of directing teaching will be much simpler, more economical of time and money, and I think much more effective than if the observation and practice are combined. This statement is made on the assumption that when observation is a definite part of the whole plan of making a candidate proficient, the observation has purpose and plan, the teaching situations are selected intelligently, the student has a definite part to perform, and the work is conducted with order and dispatch.

The program of directed teaching should usually run thru the year in order to get the "feel" of the year's activities. The fall semester is not exactly like the spring semester. For extra practice it is less important to have a complete cross section of a year's work. Also, where blocking of the teaching with other courses at the college is possible, the blocks may be distributed over the seasons. That the candidates have an opportunity of continuous teaching responsibility as a basis of some skill at this stage, it seems more important in the field of agriculture to induct the candidate into as many types of teaching as possible during this stage, subject to adequate teaching preparation and his facility in learning. This skill side of teaching calls for careful practice. This means the presence of a high-grade critic teacher in the school, probably subsidized because of special fitness. It means also a supervising teacher trainer. They are responsible that the best practice situation possible is set up.

3. *Apprentice Teaching*

Apprentice teaching appears essential if we are to approach a natural situation proposed as basic back in 1917. It means actual responsibility by the candidate teacher for a class and its activities for a definite period. Apprentice teaching would be given in co-operating high schools anywhere within the state but preferably within easy traveling distance from the teacher-training institutions. This calls for a competent first teacher in the school. It calls for full responsibility for definite term or semester. It calls for a minimum wage paid by the local school or by other legitimate agency. It may come as the part of the undergraduate program or may be a part of the graduate year. Circumstances of certification and possible employment would affect this point. The main point is that the candidate take over full responsibility that may not have been his opportunity under the limited facilities of the directed teaching program.

4. *Itinerant Teacher Training*

The above three stages of the development of a teacher are in intimate contact with the teacher-training institution. They are adjustable as stages according to policy and conception; and they are adjustable to the candidates themselves. It would be expected that these three stages would bring them out as capable beginning teachers, and it would be expected that follow-up supervision would be less needed. At present, however, they tell us that statistics indicate that teachers are not established in teaching for several years. It is the responsibility of the teacher-training institution to be ready to assist for a year or more after graduation so that the difficulty of the teacher's not being established may not lie at the college door. If the selection be properly made before entering upon practice there should be no serious failures at this stage.

In concluding this discussion, I emphasize again the place of participation as the core of the professional program. As such, I propose that we think of the four stages or phases of participation as integral parts of the whole — (1) where observation and conference introduce and orient the candidate, (2) where directed teaching places teaching responsibility upon the candidate under the supervi-

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A Philosophy for Vocational Education in Agriculture*

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N. E. Fitzgerald

IT SEEMS that philosophy and psychology are quite close, and indeed it is true that educational philosophers make much use of psychology in coming to conclusions concerning what should be done in teaching. Since this is true we propose to treat briefly a few of the psychologies that have had much influence on learning at one time or another and show their implications for a philosophy of vocational education in agriculture.

Dualism is a common term in education. Not only do we find a dualism in the popular beliefs concerning body and mind, but the principle exists in educational thinking and procedures. One current dualism is that in which vocational and cultural objectives and courses in secondary schools conflict and are set up as separate and distinct theories of education. The whole school-world has been widely divided on this issue, with its beginning going back into the early centuries. The tendency is to unify cultural and vocational education, and the leaders in educational theory and philosophy are giving a place to each, following their studies of an education that will function in the lives of the people. It should be admitted at the outset that both the exponents of the cultural and of the vocational have gone much further in the defence of their own beliefs than is approved by modern thinking.

In looking at this problem, the student must recognize that there are all extremes of vocation as there are extremes in culture, according to their advocates. Even among the members of our vocational group there is a wide difference of opinion as to the proper philosophy or psychology to use, if we are to judge by the literature. The work in agriculture is not taught in the major number of high schools on a narrow trade basis. It is, on the other hand, a course in which the students are taught to recognize problems of the environment and to use these in the exploration of science. Science, on the other hand, becomes a vital necessity and a subject of interest in solving the problems the students recognize. In agriculture there can be few decisions that are permanent, and therefore adjustment to new and changing conditions of soil, season, climate, and many other factors must be considered. From this it should be easy to see that the student of agriculture is brought, if possible, to see the relativity of all conclusions and to keep an open mind on the whole of life's problems. This may appear to be idealistic, and it is, but much good can be accomplished by this instruction.

*Excerpts from an address before the Agricultural Section of the American Vocational Association at Chicago, Illinois, December, 1935.

One of the things that complicates the study of the influence of psychology on special subjects (any subject) of study is that when we seemingly pass from an older psychology to a newer one, there are many who do not go along. Therefore, regardless of the psychology accepted today by educators generally (if there be such), there is always something or someone harking back to a former psychology. The place of transfer of training, for example, has never been settled. It is thought, however, that many things claimed for transfer of training are not true, but it is also held that with proper interpretation there is much of value in the transfer theory. The more current psychology, behaviorism, had its day and altho much that it advocated has now been, tentatively at least, questioned, the remainder stands as of value as far as is known.

Dewey[1] suggests that we often forget that all subjects were formerly placed in the curriculum to care for a "specific need in training." For example, in the early days, the subject of Latin was for training preachers and doctors, then mathematics, astronomy, and other subjects were added for the navigator. Other examples could be cited. But these, for some reason or other, came to be known as the worth-while subjects—those that gave culture. The subject material became highly organized, and, since there was a lack of such organized material, what there was was used for everything. Even Spencer,[2] in the middle of the nineteenth century, when he made an analysis of life's activities and attempted to state which knowledge was of most worth, jumped directly from the activities over to scientific knowledge, ignoring the possibilities of readjustment of subject matter in terms of current problems. Organized (logical) subject material became a dominant thing without proper justification from an educational point of view.

Faculty Psychology

Out of the era of importance of organized subject matter grew the idea of transfer of training. One way of expressing this was thru the theory of formal discipline. This idea, likely, more than others, caused the questioning of the transfer idea, which was based upon faculty psychology. In this it was suggested that there were certain faculties, such as memory, that if trained thru an organized subject would function well in other fields. This is the theory that has held in place the languages, mathematics, and some other subjects in our curricula. Clearly, this theory did not favor new subjects of study such as the vocations, but, in time, the argument of specific education came into the picture showing that since each faculty needed separate training and the activities differed, therefore special training was justified on the basis of faculty psychology. This seems then, to support the need for special education and as Bode[3] says, "The doctrine of specialized functions, and of 'specific' as opposed to 'general' education is embedded in the very core of the faculty psychology." When the movement got well under way, the divisions and sub-divisions of the faculties seemed endless and went to the point where "there was no longer an appreciable transfer because the span of the faculties became so exceedingly narrow."[3] Such a procedure caused the abandonment of the faculty psychology due to the rejection of the belief in "general" education. This argument used by Bode seems as applicable for the vocational subjects, such as the type now illustrated by vocational agriculture, as for the so-called cultural subjects. This seems to be the right conclusion, if one believes that no psychology can be made available to cultural subjects and not to vocational subjects, or vice versa. Carrying the point to an extreme, one might suggest that in the study of agriculture there would need to be a separate faculty for dealing with animals, plants, soils, and the economics of agriculture. Such an analysis makes the faculty psychology as untenable for agriculture and other vocations taught on a rational basis as it is or was untenable to the people interested in the cultural subjects. Therefore, with Bode we leave the faculty psychology and retain open-mindedly the transfer of training, but not by the formal discipline route.

Theory of Mental Studies

Following the rejection of the theory of faculty psychology, came the theory of mental states. Bode[4] has shown that this did not necessarily remove or avoid the dualism between mind and matter but that it did have a marked influence on educational procedure. This theory also shows that formal discipline as an explanation of transfer of training was not continued. Many of the difficulties of the vocations seem to be in loose terminology, loose thinking, or in wrong statements of facts concerning vocation. Some vocational teachers may follow Herbart and the steps in teaching attributed to him, but many more follow the ideas of Dewey.[5] The introduction of the work in agriculture was to take care of a need that had not been met—there were pupils in the schools who did not have the opportunity for thinking on problems of concern to them and were not of the type that would "hang on" thru a four year course of formal discipline or an allied methodology. The procedures used were not dynamic and did not challenge the youth. The cut and dried steps of the Herbartians did not add anything for the teaching of agriculture, as this subject took on the method of more informal procedures and permitted the pupils to deal with things of closest interest and from there went on into the use of any information available for the study of pupil-recognized problems. Dewey[5] says that the work on a problem should start at any of the steps. The individual may have a problem, and the preparation stage may be an entire waste of time for him. He contends that the pupils with active minds will not wait to be taken thru the steps of a formal lesson if they are already conscious of the problem and that the teacher who already knows the subject should not attempt to force upon the pupil the logical steps when the logical thing for the pupil is different from the Herbartian or other procedure. In fairness to Herbart, it

should be noted that he originally suggested four steps. Bagley[6] quotes these and explains that Ziller and other disciples of Herbart added one step and one sub-step with certain changes in meaning, likely making it even more formal than the intent of the original. Among the steps added was one calling for the statement of the aim by the teacher. This, according to Dewey, might be compared with the tapping of a bell to call the students to attention. It added to the formal routine of the lesson. So far as vocational agriculture is concerned, it allies itself with those interests opposed to formalism of extreme sorts, in the schools. It does not accept Herbartian steps as they were revised by Herbart's followers, as such and in order. On the other hand, there is found much value in the inductive development method and this is used when not too great a loss of time is incurred. It, however, is not used to the exclusion of the deductive method which, to this writer, appears to be another part of the same total procedure. As with faculty psychology, mental states is a theory not fully acceptable and yet it brings a number of things by which vocational agriculture in the high school may profit. There has been a distinct need for a review of methods of teaching as formally used, and Herbart gave us this. He also gave us the method enabling the teacher to begin his teaching with local situations—or in other words, proceeding from the known to the unknown. Agriculture or any similar localized subject of study would have been benefited by the new methods of teaching, and the teachers likely would have gone to the extremes in using the set Herbartian procedure, if agriculture had been taught, just as did the teachers of the cultural subjects. In fact, early agriculture (book agriculture the farmers called it) was taught on the same basis as other school subjects, and it was not claimed to do anything but provide information. It was an admitted failure because the giving of information was not meeting the needs of the occupational interests.

The psychological organization of subject matter is emphasized in Herbartianism. It should be remembered, however, that this dualism—logical vs. psychological—is another one of those differences that needs combining. There is ample room for both. The logical is necessary, for, first, in teaching we must have the facts. And facts not organized are not available. On the other hand, we need the psychological for the immature mind which gropes about in its attempt to find meanings. Facts alone will not improve society, but their proper understanding and use will help the individual make a contribution to the group. In agriculture much use is made of the scientific facts in all fields. Most of these are organized. If the data were not in order, that is, classified for use, the amateur would certainly have a very difficult time using the formation to solve his own problems. Therefore, let us conclude that both the logical and psychological are necessary. Bode[7] suggests that the teacher of every subject must show its practical side as necessary to develop a better society, when he says that any subject worth placing in the curriculum "must contribute to the attitude that places upon men the responsibility for the continuous re-creation of the environment and of standards for conduct with reference to that respect for men with which we identify democracy." He says further that "a procedure of this sort is quite compatible with the ideal of scholarship and of vocational efficiency." The danger here comes when only one controls—both are necessary.

Behaviorism

The theory of behaviorism has several aspects. In the first place, no one is quite sure just how far to go with it. The behaviorists, as exemplified by Watson,[8] brush aside all things that stand in the way of mechanical formation and use of habits, including consciousness, instincts, and the like. They explain thinking as an entirely mechanical thing in terms of manual, verbal, and visceral movements. Weiss[9] said, "Behaviorism claims to render a *more* complete and a more scientific account of human achievement *without* the conception of consciousness, than traditional psychology is able to render with it." Watson says that the behaviorist not only observes but that he hopes to control the behavior of man just as the physical scientist hopes to control the natural phenomena in his field.

Another type of behavioristic belief is that of adaptation. This is less mechanical and comes nearer to being a combination of conscious behavior. The last theory closely related to behaviorism is the mechanistic theory of Thorndike upon whose work so much in education has recently been predicated.

Watson's behaviorism is "a description of the native and acquired forms of human behavior" according to Bode, and "the educational psychology which emerges from this position is a psychology which makes the formation of mechanical habit the all-in-all of educational practice." Such a theory would be untenable, as the "consciousness" or "something else" present to explain intelligence which is necessary for learning is left out. Behaviorists appear to place their theory on the same level for the lower and the higher animals—all on behavior. Thorndike sets out to use the behavior of animals as a basis for studying human behavior. He, however, speaks of consciousness also and nears the mental states theory at times. He uses the laws of learning which Bode says are "laws of habit formation and nothing more." Thorndike is the one person who comes nearest to placing the behavioristic idea into educational practice. Altho he does rely on habit formation, he does not lose sight entirely of mind back of the scenes. He does take everything back to habit but he softens this with his interpretations. He uses the terms "satisfiers" and "annoyers" and explains the animal's running from the tiger "because running in that situation is a satisfier to his neurones." Bode points out that this seems to call for something that will influence or make the right connection, for this animal probably never met a tiger before. Individuals do plan —they look ahead—they have foresight. Strict habit psychology does not adequately take care of this factor. Therefore so far as vocation is concerned (except probably for those teaching the narrow skills) the habit psychology of behaviorism does not fill the need. It should be realized, however, that there is much in habit formation valuable to education. Habits are necessary in thinking, but if too deeply ingrained stand in the way of thinking. Behaviorism takes care of the habit side needed but yet fails to explain that foresight is present and necessary in the human individual. For the work in vocational agriculture in secondary schools, there must be an opportunity for thinking—for the use of intelligence. Habit formation alone, in its narrow sense, is not the function of the teacher of vocational agriculture. True, he is leading pupils in the formation of habits, but primarily these are habits of thought used in an open-minded problem-solving way. Thorndike comes quite near in some of his explanations of showing a psychology that teachers could follow. But to stop with the animal's running from the tiger and accrediting the running to the satisfying of the neurones is too vague. Had he taken the step of explaining the purpose by suggesting self-defense—protection from the tiger —his theory would have been more acceptable.

Pragmatism

Dewey[1] suggests that aims in education are themselves not the ends but stimuli toward an increased growth. H says that aims (1) must be set up on the basis of existing conditions, (2) must be flexible, and (3) must have an end in view. He calls this the "freeing of activities." The end in Dewey's thinking is not the object but hitting or reaching the object. This places the aim of education on a practical basis and gives a good setting for the new psychology called pragmatism. Bode[4] quotes Dewey in his discussion of intelligence as saying it is a "type of interaction between a living organism and the things of its environment." Dewey says, "Mind is capacity to refer present conditions to future results, and future consequences to present conditions. And these traits are just what is meant by having an aim or a purpose." Bode and Dewey agree on the need for consideration of foresight or purposiveness and in their philosophies provide a place for this. Dewey[1] says, "To be intelligent we must 'stop, look, listen,' in making the plan of an activity." This is the individual's activity and it is also his job to do the stopping, looking, and listening in making the plans, if he is to be considered as showing intelligence. Since there is never a repetition of any single situation, there is less emphasis placed on drill and habit formation in the old sense of the word. In fact, Bode[4] says, "Sheer repetition is not as important in shaping habit as we have been led to suppose." He suggests for school practice that the "primary importance is the development of habits as attitudes, with the acquisition of skills as incidental thereunto." In our work in vocational agriculture we try to get the boys to raise problems and then set for themselves goals to be reached. In order to do many of these things the learning of skills is necessary. This is done out of school hours and as a part of the larger job that the boys have planned for themselves. We consider this procedure as essential so that the narrow or small skills will not overshadow the larger purposes. The attempt is to hold in mind the larger objective and then do all the things, large or small, necessary in reaching the goal.

A practical psychology must, for use in education, advocate thinking as an outstanding—*the* outstanding—work of

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Methods

Two-Year Development of Vocational Agriculture

R. C. HEFFERNAN, Instructor, New London, Wisconsin

THE vocational agriculture department was introduced into the New London High School, July 1, 1934. The city of New London is an enterprising city of 5,000 people, located in the heart of an extensive dairy region. The farms in this region are largely owned by the operators and average 120 acres per farm. The farmers are thrifty, and the families tend to be large. My first impression, after visiting a few of the farms in various communities, was the need of education for the boys on these farms. I found that comparatively few boys attended high school and that parents were certainly not sold on education for farm boys. From the first, I decided I must sell education—agricultural education to my farm people. If I could succeed in doing this I knew my department would fill up with good farm youth. I also found that little, if anything, was known of vocational agricultural education among the townspeople and businessmen. So the problem of acquainting the townspeople as well as the countryfolk with vocational agriculture was another problem. I felt that the support of the city people was almost, if not as important as the support of the countrypeople. I, therefore, started out on a selling campaign—a campaign to sell vocational agricultural education to the people of the various communities in the school patronage area.

I followed these methods of attack: First, I asked for a meeting with my school board and superintendent. This they gladly gave me. I spent one evening talking over the activities and problems in developing a successful vocational agriculture department. I explained the many activities of the department and answered the many questions of the board and the superintendent. I explained the beginning and growth of this type of education. After this meeting, I was satisfied that I had the interest and support of my board of education and the superintendent. This has proved a great help in developing my department.

Second, the superintendent and I prepared a form letter, which we both signed, and sent it to 900 farm families in various communities around New London. This letter explained that a course in agriculture had been introduced in the high school. It briefly outlined the purpose and the various activities of this type of education—Vocational Agriculture. We offered the services of the agriculture teacher, his department, and the school to the rural people. This letter helped a great deal, because it was an introduction to the people in the country, with whom I was to come in contact. It started the people thinking of my work and department. I received, and still do, many calls for service as a result of this letter. It was a very effective means of advertising.

Third, I enlisted the services of my local newspaper editor. This was not hard to obtain, as he was a real booster for the development of an agricultural department in this vicinity. He ran many articles on the instructor, department activities, and their progress.

Fourth, before school started in the fall I appeared before the service clubs—Rotary, Lions, and the Chamber of Commerce. I did as I had been doing with all people contacted—I explained my work, its uses and value, such as the social work in the community, the education for the farm boys that would be of interest to them, the possibilities of bringing the town and the country closer together. All of these organizations have been behind my work 100 percent. Due to my meeting with the Chamber of Commerce a farm day has been developed and held once each month since November, 1934. I have charge of these farm days. They have become popular with the town's business people, as well as the country people. Our first farm day was a horse show. We had sixty-five head of horses entered. Businessmen gave merchandise prizes to the winners. Professor Fuller of the Wisconsin College of Agriculture attended the meeting and gave demonstrations on big team hitches and breaking a colt. We estimated 500 farmers attended this meeting. The next event of this series was an Ag-Roundup. The party was held in the high school gymnasium. About 2,000 people participated in the stunts and dancing. Other farm days were a grain show and dairy show. Some months we have a stock sale with the merchants giving away about one hundred dollars in prizes of merchandise and cash.

The enrollment of the agriculture department was seventy boys the first year and ninety-eight the second year.

The first summer before school opened I visited every farm boy enrolled in a general course in high school. I also had a list of the eighth grade boys who had graduated that spring. I visited all these boys and their parents, explaining the work, the various courses, and the activities of the Future Farmers chapter. This aroused a great deal of interest. Late in August, I selected six of the prospective agriculture students and took them to the state F.F.A. meeting at the state fair. Contacts at the meeting stimulated interest in the boys of the group. After school opened in the fall I called a meeting of all the boys of the department and organized our local chapter of Future Farmers of America. A program of work for the year was drawn up by a committee. The first event of the F.F.A. year was the initiation ceremony. I invited the officers and adviser from a neighboring chapter to come to New London and give my F.F.A. candidates the Green Hand degree. I had forty-nine candidates. To this meeting each boy brought his dad. Forty-five dads, the superintendent of schools, and a representative of the board of education were present. After the meeting games and lunch were enjoyed. The accomplishments of the first year were as follows:

1. We had athletic teams and played in F.F.A. conferences and tournaments in basketball and softball.
2. We held a rural one-act play tournament to raise funds for chapter uses. Seven plays entered and we cleared $80 for the chapter.
3. We held a two-day farmers' institute at which time outstanding speakers appeared.
4. We presented one F.F.A. radio broadcast from WHA, Madison. Twenty-one boys took part in the broadcast.
5. We presented news items to the local paper regularly.
6. We held a parent-son banquet for which 240 parents and boys assembled.
7. We worked out a system of points for letter awards in agriculture corresponding with the regular awards of the high school. The 6-inch chenille and felt letters or emblems of the F.F.A. were adopted and presented to twenty-six boys who had earned them.
8. We presented bronze F.F.A. pins to 40 Green Hands.
9. We presented gold pins to 37 Future Farmers.
10. Nine boys attended the week leadership camp at the state fair.
11. Seventeen F.F.A. boys enjoyed a four-day outing at the Chain of Lakes at the close of school.
12. Our chapter sent two delegates to the state F.F.A. meeting in October.
13. We sent judging teams to the state F.F.A. judging contest in Madison. Teams were in livestock, crops, potatoes, apples, and mechanics. Many of our boys placed high in these competitions.
14. We sponsored a home talent play, "The Barnyard Jamboree," to raise money. We cleared $60.
15. We had an F.F.A. booth at the county fair and won first place in competition with 5 other F.F.A. booths.
16. Every boy except one had a fine major project and a good program of supplementary project work. Some boys had two major projects.
17. We held a rural school crop judging contest and gave prizes and certificates to winning teams and individuals.
18. We had several F.F.A. parties.
19. We sponsored an "Aggie" float in the homecoming parade.
20. We held a grain show.
21. F.F.A. boys presented and gave a program at a Rotary Club luncheon.

This program of accomplishments represents a vast amount of work and planning, but once it was accomplished it established the department of vocational agriculture in the New London High School.

The vocational agriculture teacher's

biggest job aside from his all-day students is the part-time group. Every community has a large number of boys of school age who are not in school. These are the boys who are on the farms and have actual problems to face every day. They need and desire leadership training. Every agriculture teacher has as his responsibility the development of a good part-time program in his community. In the vicinity of New London I found a large number of boys who were not in school and were not able to attend. I started a part-time school for these boys in September, 1934, and have been meeting them ever since. During the regular school year we meet once each week. In the summer we meet once a month. In this group I have 74 boys enrolled. They have their F.F.A. organization with their officers and a constitution. I have held this group almost without the loss of a member for two years. Besides the class work and project work these boys have use of the high school athletic equipment and have developed some boxers and wrestlers.

Evening schools are another phase of an agriculture teacher's work. I have had one adult evening school this winter. I have used a plan that I like very much. Our meetings are held at the various farm homes of the members of the class. Women and men attend the classes. The home economics teacher holds meetings for the women, and I hold meetings for the men. After the meetings a social time is enjoyed with lunch served by the hostess. I find this is a successful plan for holding my evening school.

Another phase of the agriculture teacher's work is the development of the social life of rural communities. With this in mind I have tried to develop a program of community clubs. These clubs must be full of interest to attract the attention of farm people. I have organized in the two years six active, live, community clubs. These clubs must be organized well and supervised closely until well started. Then they will carry on themselves and become a real benefit to any agriculture teacher in keeping in touch with his rural people.

In concluding I might say that every community presents different problems to the teacher, but, regardless of the type of problem, there is a solution for it if the will is there. Our rural people need training to solve the vast number of problems facing the American farmer of today and in the future. They need training to develop agricultural leaders. They must learn to live and enjoy their surroundings and one another. To aid our rural people the vocational agriculture teacher has the task of solving and meeting these needs.

Participation and Teacher Education

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sion of the critic teacher and teacher trainer in specially subsidized schools, (3) where apprenticeship teaching turns over full responsibility to the candidate for a definitely longer term under the supervision of the critic teacher and the teacher-training institution and arranges for a minimum wage, and (4) where itinerant teacher training works for the refinement of the teaching and the establishment of the teacher in teaching.

Building a Program of Work

J. E. COWLES, Instructor, Urbana, Virginia

IN A state with an agricultural section many miles east of Norfolk and its western tip west of Cincinnati, with farming as varied in practices and products as one finds from the lakes to the gulf, it is necessary to go beyond *type* to find a basis upon which to build a program acceptable to all its instructors. This is especially true in the eastern part of the state which lies in the coastal flatwoods "mixed type" area.

Confronted with this variation, the program of work committee of the Virginia agriculture instructors in seeking a common denominator to express the objectives of their program has realized that considerable self determination must be left to each individual instructor. The committee has felt that the efforts of all could be commonly expressed by the development in their students of three abilities which the committee reasonably conceived to meet the needs and activities of an educated farmer. These abilities are:

1. The ability to make a living and develop a home
2. The ability to secure an economic income sufficient to maintain a satisfying standard of living
3. The ability to participate in social activities as a means to a more abundant life.

The abilities may be classed as maintenance, economic, and social. This classification determines their sequence on the program but not in the classroom. They may be developed in any order or combination, or in any year as may be best suited to the situation of the individual instructor. No attempt is made to evaluate relative importance or proportion time on each; this must be left to the needs of the community.

While the ability to maintain himself, dependents, and the farm plant, is the first requirement of the adult farmer, the second ability—securing an economic income—is the one most likely to appeal to the high school youth who without thought has been in the habit of leaving the first to Dad but has begun to develop a keen desire for spending money of his own. Upon the successful development of this second ability depends the third, for social usefulness and culture depend upon an adequate economic income. "George Washington was better able to serve himself and posterity because he was financially independent." The instructor and student might keep in mind that the next four to 10 years is preparation for the ensuing 30, and that if during the training and experience of the next 10 years the boy develops the ability to plan and carry out enterprises that will yield a fair economic return he is likely to be a far more capable citizen than if we graduate him with a "grade" and leave him to be submerged in an economic torrent of which he has never even thought. The objective of a vocational course is functional; therefore the object is not to graduate the boy from school but to graduate him into successful farming.

Any one of the abilities mentioned may often appear to carry over into the field of the others. This overlapping is normal because of the close interrelation of the farmer's home, business, and social life. They should be thought of as concurrent threads in the skein rather than as separate and distinct objectives. This makes it difficult to set up definite methods of developing these abilities; however, the following are suggested.

The average high school boy is not yet responsible in providing sustenance for himself, family, or livestock, but this ability can be developed by including in the supervised practice program such enterprises as home garden, home meat supply, home cow, home flock, or others in the production of crops and livestock commonly used in providing sustenance for a farm unit in the community. Also work in home conveniences, farm and home sanitation, home ground improvement, farm shop, and at least an appreciation of good home architecture.

The second ability is best developed by deliberately setting up economic objectives in dollars and cents and then planning with the student a size of business in the production and marketing of products which gives reasonable promise of reaching the objectives. The enterprises should be selected with the view of meeting the increasing economic needs of the boy during the period of training, the period of getting established in farming, and the period of full responsibility as a farmer. A balanced program relative to full-time employment, labor efficiency, and soil maintenance should be emphasized and yields per unit carefully checked as the program develops. Costs per unit of production can be compared and standards of production set up. The establishment of the ultimate economic objective can be determined by a survey in the community of the necessary size of business in dollars and cents to provide a net income sufficient to maintain a satisfying standard of living. A comparison of high and low prices in relation to percentage of net may be studied. Also hold group discussions on what makes prices, and on the why of tariffs, quotas, and other complications in the movement and marketing of agricultural products so that the boy may realize that economic income isn't merely a matter of unhindered supply and demand. The proper use of credit and facilities for farm credit should be studied by participation as much as possible, with caution as the password.

The third ability is not generally included in the supervised practice program by most instructors except in a modest way in F.F.A. work. The Future Farmers of America organization must develop in the boy the ability to express himself actively and intelligently in the nation's social program or accept the discrimination that will surely come to a group socially deaf and dumb. Failure to meet the challenge of group discrimination and national exploitation versus parity and conservation will result in dumb drifting if not "dumb driven cattle." As has been pointed out by leaders in education the statement that we are in a race between education and catastrophe does not necessarily mean that we shall win that race. We feel the race will be lost if the farmer has to continually depend upon others to do for him in a social capacity those things he should do for himself. Moreover, we believe him capable of developing a mode and manner of rural living more satisfying and more cultural than the present urban

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Farmer Classes

Same Farmers Study Potato Production for Five Years

N. K. SPEICHER, Teacher, Mill Creek, West Virginia

WHEN I began teaching vocational agriculture in Tygarts Valley high school in 1931 little had been done to further the cause of adult education in the community. Tygarts Valley had been known for its beef cattle production, and no one had thought of potatoes as a cash crop. A growing interest seemed imminent among the farmers of the valley. Due to this interest I decided to help organize the agriculture interests and secure the farmers' support to further the vocational agriculture program in the high school.

I made a friendly visit to fifteen farmers of the community, using this opportunity to talk over their farming program and the type of farming in which they were most interested. Since potatoes were considered a minor cash crop, I learned that they were eager to further their knowledge of potato production. As a result of these visits I arranged a suitable date and time to meet at the high school, where we had assembled information on potato production from other states.

At the first meeting ten farmers were present. By means of the conference method those present decided to study potatoes. They chose one of their group to act as secretary, to take down notes and recommendations for future use. The following problems were selected for study:

1. Selecting and securing seed potatoes
2. Selecting and securing fertilizer
3. Selecting land
4. Preparing seedbed
5. Treating seed potatoes
6. Cutting seed potatoes
7. Planting seed
8. Cultivating
9. Spraying
10. Keeping records
11. Harvesting and grading
12. Marketing.

At the first meeting after they had decided on potatoes as an enterprise, a survey of potato acreage and practices was listed on the board. Each farmer contributed his share of the information, with the group reaching this conclusion: to study the problem of selecting and securing seed potatoes at the next meeting.

The problems to be studied at the next meeting were drawn from the group and written on the board. The group offered ten practical problems confronting them. The conference method was used in discussing the problems. The farmers gave their experiences, which were supplemented by experimental data from various stations, charted on white paper 24″x 36″. I used black crayon in making the charts so they could be seen in the back of the room. I found that some of the charts were too dense and could not be understood by some of the group, as some could not see the figures. I made the figures larger and the charts as simple as possible. After the group had given their experiences on a problem I would have charts handy and would pin them on the board with thumbtacks, reading the charts with care, making clear any points they did not understand. After discussing their experiences and experimental data the group would draw up a conclusion as to the best practice to use, with the secretary taking down each conclusion reached. I did not give my opinions except when the problems were such that no member of the group had had experience with the question. Every problem was discussed in like manner, and at the conclusion of the first job, they decided to study selecting and securing fertilizer the next time. They also listed some problems for thought until the next meeting. The meeting lasted for two hours, which they decided was long enough. Several times before we had finished a job, we quit at the end of two hours, finishing the job at the next meeting.

Fig. I Treating seed co-operatively

Much interest was shown in each meeting, and thoughts were held on the job under discussion from start to finish. Ten potato growers were enrolled, and a number of visitors attended the meetings at intervals and were called upon for their contributions.

As the meetings progressed the group pooled their orders for seed and appointed one of their members to do the ordering for them.

No seed potatoes had ever been treated before. When the job was studied in 1931 they decided to use the hot formaldehyde treatment. They not only set up a tank (Figure 1) and treated all their seed, but also tested a few rows of untreated seed to see the results. Their interest was so great that they decided to hold a potato field day July 2, at which time they invited specialists from the state university and visited each potato field (Figure 2). By this means they could see the results of cultural practices, fertilizer treatments, and spraying, and could study the diseases while the potatoes were growing.

Fig. II First Field Day

The meetings were held seasonally. Several meetings were held during the summer on marketing. They decided to appoint one member as a selling agent. He would accept the orders and notify the members, and together they would supply the amount necessary to fill the order.

As a result of this first evening class the group has had many new experiences, and every fall they ask for another class so as to study their problems in potato production. This makes the fifth year that the same group has been meeting. They have as many problems this year as they had the first.

Each member grew potatoes, and I visited each several times during the summer, at which time I discussed the practices he was using and brought in the conclusions reached by the group so that he could decide whether he was using the proper practices.

Summing up the steps, I:

1. use a personal visit to the home farm.
2. know each farmer personally and his farm conditions.
3. let the group select the enterprise and the problems to be studied.
4. let the group appoint their own secretary.
5. know what practices each farmer used in previous years.
6. have experimental data on charts in handy places.
7. use charts only at proper time.
8. make charts simple and understandable.
9. let the group draw their own conclusions.
10. hold the thought constantly on the problem.
11. call meetings at convenient time and place.
12. make home visits while class is in progress.
13. make summer visits to the enterprises.
14. prepare a mimeographed copy of all conclusions for each member.
15. don't make meetings too long in duration.

OUR COVER

Home Beautification Evening Class

G. N. WAKEFIELD, Teacher,
Homestead, Florida

BEAUTIFICATION of home grounds is one phase of agricultural education that has been neglected. We have been so busy doing other things that we have overlooked the value of pleasant surroundings. In older communities where there are a number of families who own their own homes and who have more or less permanent incomes, one finds a number of well-kept, well-planted grounds. These families take pride in keeping their grounds, just as they take pride in keeping their homes painted and well-ordered. Yet there are many communities where the struggle for existence has been so great or where lack of home pride, thru ignorance, is so prevalent that well-planted, well-ordered homes are the exception rather than the rule.

Probably one of the reasons why so little effort has been made to teach the farmer how to improve his home grounds has been the feeling that the farmer would be offended if it were intimated that his grounds were not as they should be. Another reason is the fact that many farmers, especially in the south, live in rented homes, and they feel that any effort expended in improving the property would be a loss to the tenant. I believe, however, the greatest reason for failure on the part of the teacher of agriculture to include home beautification in his program, is the notion that any attempt at improving the landscaping of the home grounds requires a specialist, or in other words, a landscape architect. All these reasons are not valid.

Homestead is a comparatively new community, having been settled only 35 years. It is situated at the lower end of Dade County 30 miles from Miami. While the natural vegetation in this section is luxuriant, there are few big shade trees such as are found farther north, and what trees and shrubs there were originally have been destroyed thru ignorance. However, being located as close to Miami, where real estate salesmen and wealthy families have turned the landscape into a veritable wonderland, considerable interest has developed in ornamentals, their use, and sale value. For several years the vocational agriculture department of Homestead high school, in co-operation with the local chapter of Future Farmers of America, has attempted to improve the school grounds. As this work progressed, persons in the community began to ask for information about the use of plants on their own grounds. There also developed a demand for plants to be furnished from the school nursery. These demands became so great that the instructor determined to invite all persons interested to attend an evening class in home beautification.

In order to be certain that everyone in the community had an opportunity to enroll in the class, a news article was given to the weekly papers stating that a class would be organized for adults, that each person enrolling would be given all the assistance possible, and that each person enrolling would be given a limited number of plants from the school nursery. This news article was followed by talks at a parent-teachers' meeting, the woman's club, garden club, and various service clubs; these talks were followed by letters to members of the various clubs; then personal visits were made to those homes that had been making the most requests for information and plants.

The conference procedure is without doubt the best known method of teaching adults. However, landscape gardening is a subject about which the average person has little or no information. For this reason it was necessary to use the lecture method to a large degree. The class included a number of persons who were building new homes or who had never made any attempt at beautifying their homes, as well as many who had some good and bad features in their plantings. All these facts were considered carefully in planning the instruction. In developing each phase of the instruction an attempt was made to take an actual situation, leaving those features that were good and proceeding to rearrange those that were bad.

Meetings were held each week. In closing each meeting a few minutes were devoted to developing the subject for the next meeting, using the conference procedure. When possible, the services of a landscape architect or some person in the community were used for twenty minutes. The outline of the course follows:

1. Making a plan of the grounds
2. Locating the house
3. Arranging walks and drives
4. Dividing the home grounds into simple areas
   - A. The public service area
   - B. The private area
   - C. The service area
     - a. Vegetable garden
     - b. Flower garden
     - c. Laundry
5. Foundation plantings
6. Border plantings
   - A. Property line
   - B. Screens
   - C. Rear planting
7. Rock garden
8. Making pool
9. Rose garden
10. Perennial garden
11. Making the grounds livable
    - A. Sundials
    - B. Birdbaths
    - C. Garden furniture
    - D. Awnings
12. Lawns
13. Walls, fences, and gateways
14. Garden house
15. Selecting and arranging plants
16. Planting and care of plants.

All members of the class were asked to make a map of their home grounds, showing the plantings at the time. From these maps transcripts were made, leaving only those features that could not be changed or that were so good that it was not necessary to change them. This part of the instruction called for a great deal of supervision. The members had to be shown something about making maps and how to locate the various features of their grounds on paper.

The transcripts having been made, each member of the class was asked to add new features as the course was developed. Here, too, a great deal of supervision was necessary since there were no two homes just alike and it was not desirable to have all grounds the same. The hardest part of the instruction was getting the student to follow a set plan, just as is true with any supervised practice program. However, there were some very good plans made and carried to completion. Further supervision was given when the students started carrying out the plans which they had made. No plants were made available until the students had made a plan and were attempting to carry it out. The supervised practice programs have been continuous in some cases over a period of three years. It was found to be a better practice to concentrate on a part of the grounds and get that feature finished before attempting to start another.

There is no better form of instruction than visual instruction. This is true when teaching any subject, but it is particularly true in teaching home beautification. Several forms of visual instruction were used in connection with this class. Better Homes & Gardens magazine loaned several illustrated lectures that were of great assistance. The class made a tour visiting private estates that had been previously selected because they brought out certain points stressed in the meetings. Another form of visual instruction was the examples of members of the class and the beautification work being carried out on the school grounds. Certain homes were selected and special effort was made to complete the landscaping so that other people in the neighborhood might become inspired to carry out their plans. This has been a great help not only to members of the class but to individuals who have never attended the class. Also, the work of the Future Farmers of America on the school grounds has been valuable in inspiring these boys to carry ideas home and put them into practice.

In reporting the value of improved practices for an evening class in home beautification it is necessary to carefully consider all the factors. One might say that the value of the improvements could be given by the owner of the home. However, this does not seem the best method of arriving at increased value. We quite often value our agricultural products at more than we can get for them on the market.

Another method of securing increased value, and one that was suggested by a member of the class, was to get a real estate salesman to place a value on the improvements. This method has its weak points also.

The method finally agreed on was a combination of the two previous suggestions and a value placed by a landscape architect. This was not accurate nor did it represent the esthetic value to the family or even the cash value as given by the owner of the home.

The total value of improved practice for 24 students was $1,439. The greatest amount for any one individual was $195. However, no one knows what the total value has been to the community. After three years there still seem to be people interested in the class, and any number of others who have never attended a class have been inspired to work or hire professionals to beautify their homes.

Finding the Needs of Farm Boys

C. H. BONSACK, Instructor, Oregon, Wisconsin

IF REALLY serious thought and study are given to the problem of finding the needs of farm boys, the result of that thought and study is much like stirring up a hornet's nest. From the outside, both the problems and the hornet's nest appear to be serene and peaceful. Underneath each, however, there is a hidden challenge that demands agile thought and action on the part of the investigator.

C. H. Bonsack

When the usual procedure of selecting a unit course of study is undertaken by heterogenous groupings of farm boys between the ages of fourteen and twenty-one years, the question always arises whether actual or merely apparent needs are being expressed by the unit selected. Selections of units dealing with phases of farm shop and other attractive manipulative subject matter units suggest that those selections are largely based on apparent needs rather than actual ones. The question naturally arises at this point as to the distinction to be made between apparent needs and actual needs. The distinction can, perhaps, be best pointed out by referring to the recent experience of the writer with a part-time class.

Realizing that an age difference and an experience problem existed in the majority of the part-time classes which the writer has conducted during the past eleven years, he decided to restrict the present group and include only those boys who were graduates of his department. The restrictions might have been made to include any other classification of boys as to age and experience grouping, but the one chosen illustrates the point in question. The particular point of emphasis is, that a group of boys with like experience and age were represented in the graduate group, as might have been the case in any other selection.

Approximately 30 graduates were contacted and invited to attend. There were more graduates, it is true, but the age limit of twenty-one years was used as the upper criterion in this experiment, and hence only those within the limits set were approached on the matter of attendance.

The first startling discovery that resulted in this experiment was that only 16 of the possible 30 responded to the invitation of the agriculture instructor. At first glance, one would conclude that there was something wrong with either the instructor or the proposed environment, and it is true that the instructor was more than mildly worried about the size of the enrollment. He felt certain that here was one group, at least, from which one could expect nearly 100 percent response, since he was personally acquainted with each young man beyond the usual limits of the term. After some intensive investigation the instructor found that there were two important reasons for the absence of the other 14 prospects. In the first place, about half of this number were working as laborers on neighboring farms, and the irregularity of their duties kept the boys from enrolling because attendance would have been interfered with. The second cause was the more potent of the two and perhaps affected the first group to a large extent as well. That cause was that two or three had just married and were trying to establish homes, while the rest were in the various and doubtful stages preceding matrimony, and their spare time was in urgent demand elsewhere.

To return to the 16 boys who had enrolled and with whom we shall be most concerned, five courses of study units were suggested by the group as desirable. They included rural electrification, agricultural adjustment programs, pastures and forage crops, farm shops, and cooperative marketing. Each one of these courses represents an extensive field of study and is worthy of attention on the part of any part-time class. At first glance it would appear that any choice of this group would be a profitable one, and yet the balance of the guesses as to the ultimate choice would favor some form of shop instruction as the most likely. In respect to the final choice, the second startling fact was discovered—namely, that the group was almost unanimous in its choice of the unit: pastures and forage crops. Even the instructor was somewhat at a loss to explain why that unit was chosen in preference to any of the others. It is at this point that the distinction between actual and apparent needs can best be pointed out. If this group had chosen either the first or the fourth unit listed, the conclusion could have been drawn that they were merely choosing subjects in terms of what might have appealed to them as interesting courses since they would involve mechanics and the resulting manipulative procedures. If either of the other two courses had been chosen, the same conclusion might have been reached, since these units embrace present-day economic questions of more or less current interest. Superficial interest is perhaps the best term to explain what is meant by "apparent needs."

On the other hand, the ultimate choice of the unit, pastures and forage crops, suggests a deeper interest on the part of the group and explains what is meant by "actual needs." This contention is strengthened by the reflection that the boys in this class expressed the following reasons for their choice: 1. The problem was recently acute. 2. Newer and more recent data were desired. 3. The problem had not seemed important until after graduation and they were helping at home as partners. 4. Age consciousness began to play a part. 5. Outlook was different; they were beginning to plan farms of their own.

And these reasons were expressed in spite of the fact that the above unit occupies a prominent place in the first year high school course of farm crops. It appears further that repetition of subjects in agriculture might be as worth while as repetition in other lines of endeavor.

Referring again to our problem, finding the needs of farm boys in part-time schools, the writer is tempted to raise the following questions:

First, shouldn't we have narrower ranges of age groups in part-time classes, since age desires of heterogenous age groups are generally in terms of "apparent needs"?

Second, how can we be certain that "actual needs" are guiding the choice of part-time subject units?

Third, to what extent could repetition of high school class subject matter affect part-time school attendance?

Part-Time Work in Strawberries

E. E. PULS, Teacher, Independence, Louisiana

THE community which this school serves is in the heart of America's leading strawberry-growing section. It is natural, then, that the interests of the out-of-school youth who expect to establish themselves as landowners should be centered upon learning the best cultural practices of strawberry growing. A careful check on the conditions as found in the community revealed that constant cultivation of strawberries for more than 40 years, with little or no thought of soil improvement, had brought about a most disastrous type of soil depletion. The soil was extremely acid, a condition which is not conducive to the best results in strawberry production even tho the plants may be acid tolerant.

Harvesting a superior crop

With these things in mind the teacher of agriculture worked out an annual plan and a long-time program which gave precedence to these most urgent needs. Class members were taught the necessity of testing their soils to determine whether the existing conditions needed correcting. A careful study of plant growing and plant selection was taken up. The need for disease and insect control was stressed. Demonstrations in the correct methods of mixing spray materials and their application were given before groups of class members.

An example of splendid results obtained from intelligently following recommended practices is seen in the accompanying cut. This part-time student tested his soil and corrected the acidity with applications of lime. He grew his own plants, selected the desirable ones for re-setting, and sprayed for disease control according to recommendations. To date (April 17, 1936) his yields have far outstripped any of those in his immediate community and are considerably above the community average for the past three years.

A Philosophy for Vocational Education in Agriculture

(Continued from page 71)

the school. This is the viewpoint of both Bode and Dewey. Vocational agriculture in rural high schools is a challenge to the older type of information-securing methods. It depends on interest in local situations (probably as a part of a world problem, however) as a way to start and continue the pupils' work in the classroom. Agriculture is used as the subject matter by which the pupil is enabled to fit himself for life's problems. Vocational agriculture is not a narrowly conceived part of the curriculum, but its purpose likely has been abused. It is an attempt to give the individual those necessary experiences to enable him to keep an open mind in all problems and to change his procedures as he finds this necessary in a constantly changing social and economic world. Adjustment to economic situations is not the only adjustment —the social need is just as great.

The great need so far as vocational agriculture is concerned is the breaking down of the barrier that still sets off the vocational from the cultural. Vocation has drawn much from the various psychologies of learning, and we believe that culture can learn much from practical procedures used in the vocations. Furthermore, we need the philosophy soundly put, that vocations on the narrow skill basis have no place in the schools except that we give these narrower conceptions an opportunity to grow out of what is taught in school. These narrow skills then will come as additional learning upon the basis of child interest in the problem of importance to him, under guidance of a teacher that sees neither vocation nor culture but both.

Concluding Statement

We have come a long way in educational thinking from the time of the "Soul substance theory" to the present more generally accepted philosophy of pragmatism, as explained by Dewey, Bode, and others, but we have not gotten away from dualism in education. Many people in their thinking of mind and body today are as primitive in their beliefs as were those who championed one side or the other hundreds of years ago. We find one group of people championing the individual rights of the child, while another believes that regimentation is the only procedure to follow in solving the problems of life. We have heard much about the cultural and the vocational; both have fought their own battles and have come out at the end narrower and narrower. In fact, we arrived at the point where the situation was so distressing that it was intolerable, before the defenders of the cultural became more tolerant and the sponsors of the vocational broadened their outlook. In his writings, Dewey has suggested that neither culture nor vocation is exclusively what is needed or possible to have; in fact he says there can be no culture without vocation.

The outstanding characteristic, probably, of philosophy is that it deals with wholes instead of parts. It is not conceivable that philosophy might attempt to evaluate the place of vocational agriculture in a public school system without consideration of all other subjects of study, the social and economic background of the people and any other factors that in any way influence the whole situation. The same statement holds true for any other subject of study, every one of which is a part of the total environment of educational influence.

From the speaker's point of view, the difficulty concerning the philosophy in vocational agriculture today is that workers in this field have probably not fully thought out a complete philosophy and certainly have not agreed upon such generally. In the first place, it seems unfortunate that any of the work in agriculture given in high schools should ever have been called vocational. It certainly has never been and is not now anything other than educational guidance in the field of agriculture. It would seem impossible to ever call a subject of study vocational when the individuals interested do not have an opportunity for a normal experience in the situation. We claim considerable value for supervised farm practice work and the speaker agrees with this, but raises the question as to just where the value lies. Dewey has said that all subjects of study were formerly placed in the curriculum to care for a "specific need in training." Since this is true, it would seem that culture, from the very beginning, was built on vocation and vocational training. Agriculture in the high schools today may contribute in exactly the same way to the development of a culture in America. The early vocational training was given for preachers, doctors, and later for navigators. We have progressed in the present century to the point where we are now giving this training for farmers and for other occupational groups. It is interesting to note that the subject of Latin was introduced for the training of preachers and doctors and that because of its value there, it was imposed upon others—a fallacious generalization. Bode suggests that we necessarily must do something to change our education today and looks for help in his early environment. He recognizes that social and economic times have changed and that because of this, even in the elementary school, the procedures in teaching are quite different. He notes that education which was formerly given at home necessarily had to be taken over by the school, because the changes in economic status made it impossible for the parents to give the training needed. Besides, inventions and new types of entertainment brought into the community things of interest to the young people, but with which the older people did not know how to deal. We can look back to the time when all school work was entirely divorced from the work of the community—to the time when parents are supervising the activities part of the educational program that is now so much discussed by progressive educators.

A philosophy for vocational agriculture, as for any other vocation, should, it seems to the speaker, be very broad. It should be one that will combine the cultural and the practical, with the child as the center of all planning and training. We have forgotten somewhere that the child is the only thing that counts in education and that the subject of study is of no importance unless it contributes to a better trained individual. Most of us know that vocational agriculture can contribute a great deal to the betterment of rural life. It has a sympathetic point of view that other subjects do not have, because the teachers are trained with that in mind. We are certain that vocational agriculture can contribute to each of the Seven Cardinal Principles and that it should. We probably have trained our teachers too narrowly in the past and have not given them an opportunity to look to the larger life of the child, which should be the guiding influence. We believe in a functional education, such as that suggested by Charters in his writings beginning about 1909 and continuing up to the present. Having a functional education does not in itself breed narrowness—the prospects are for the opposite. Look at some of the subjects in the elementary schools. Of what value is arithmetic to a child if we do not train him in the use of figures and problems that will be lifelike to him? Agriculture has a different part to play, but it, too, should be functional. We are trying to give to adolescent boys of America an opportunity to study their own environments and their own problems. We do this thru use of the project method which sets problems and then utilizes subject matter for problem solving. This gives opportunity for developing real thinking. We believe that the boys can do this thinking and will do it, if the problems are made clear to them. Rural boys are interested in local problems and especially in the farmer's problems, since that is their closest contact. Let us make use of this close contact with agriculture to build a procedure to help the boy to become a broadened student of the world's interesting problems and facts. Let's think of the boy as the one to be developed and utilize to the fullest the subject of agriculture which has so many advantages as a subject thru which to develop rural youth.

1. Dewey, *Democracy of Education*, pp. 84–89.
2. Spencer, *Education*, Ch. 1
3. Bode, *Fundamentals of Education*, Ch. IX
4. Bode, *Conflicting Psychologies of Learning*
5. Dewey, *How We Think*, Ch. XV
6. Bagley, *The Education Process*, Ch. X
7. Bode, *Modern Educational Theories*, Ch. III
8. Watson, *Behaviorism*, Chs. I, V, X, XI
9. Weiss, *A Theoretical Basis of Human Behavior*, pp. 346–357

Book Review

Selecting, Fitting, and Showing Horses, Beef Cattle, Poultry, Swine, Sheep, and Dairy Cattle. Interstate Printing Co., Danville, Illinois, list price $4.80 per set, $1 per single volume.

This series of books by Nordby and Lettig on selecting, fitting, and showing livestock, will serve admirably as reference books. There are six books in the series, each of approximately 100 pages, covering separately the subjects of beef cattle, horses, sheep, swine, dairy cattle, and poultry. The subject matter in each of these books is presented in a clear, concise way and is of very practical nature. The illustrations are excellent and have been well chosen to supplement the texts.

This series makes a very valuable addition to the school library and will prove of particular value to students who are fitting any kind of livestock for exhibition.

It is assumed that these books will not be depended upon altogether for information regarding different breeds. This can be secured from other sources.—F.W.B.

Future Farmers of America

Egg-Laying Contest

L. J. HAYDEN, Wellsboro, Pennsylvania

SINCE ours is a community in which dairy cattle and poultry are the leading kinds of livestock we spend more time studying them. After having had a full year course in poultry husbandry and most of them having carried a poultry enterprise, the boys were interested in some of the newer phases being developed in the poultry business. Last fall someone suggested we get a battery for laying hens and try out the system. After some little discussion I saw the boys were much enthused over the plan. I allowed them to take class time to elect a superintendent of the egg-laying contest and to take time during farm mechanics periods to mix feed, weigh hens, or any other extra work that the contest required.

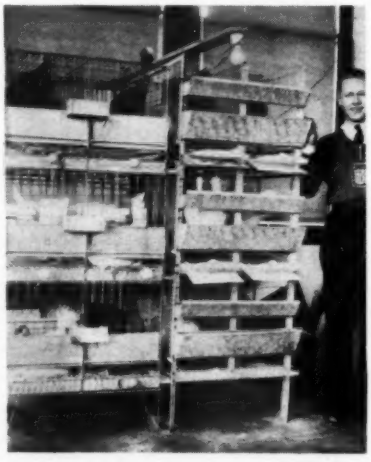
In ten years of teaching I have never had as much community interest aroused by a school project as did this laying contest. I wish now that we had kept a visitors' register so that we would know exactly how many people came in to see these hens. I am sure that there were at least 100 people who made a special trip for the purpose of visiting the project. For this reason I feel well repaid for the efforts. The expense was not great. Even tho we did not make any money, we learned some of the problems which we had no idea existed for the caged-layer poultryman.

There is no doubt that much of the success of this project was due to the unfailing interest of the "superintendent." The agriculture teacher seldom makes a mistake when he lets the boys select their own leaders. William Theophel, a senior pupil, was elected to this office of superintendent, and here is Bill's own story of the contest:

"In November the boys of the Fawn chapter of Future Farmers of America decided definitely to hold an egg-laying contest. We immediately ordered a twelve hen-laying battery and started the contest December 4. We invited the farmers and boys of the community to enter one hen of any breed. We had no trouble in getting hens. In fact, the response to our call was so great that we borrowed another battery and started a second contest a month later. The class elected a superintendent who had charge of entering the hens, making out reports, scheduling the workers, and operating the lighting system. The boys of the chapter were divided into groups of two each. Each group had charge of feeding, cleaning out batteries, and weighing the eggs for a period of two weeks. The dropping pans had to be cleaned daily, the water pans cleaned three times a week, and the eggs from each hen were weighed individually and the weight recorded.

"We weighed the hens at the end of each month and found that they gained weight in the batteries. By cutting out some of the corn in their ration we were able to keep them from becoming too fat. We fed the Ohio "All Mash" ration. Lights were turned on by an alarm clock each morning. The eggs produced were the property of the chapter and were sold to the homemaking girls, to the teachers, and to the local store.

"During the latter part of the contest the class conducted a little research work. Upon examining eggs that were just laid we found that some had a visible air cell while others did not. When we asked Mr. Hayden: 'How soon after an egg was laid would the air cell appear?' he replied that he did not know and suggested we find out. With several things in mind we began examining every egg laid between nine and eleven each morning. As soon as the air cell appeared, we measured it in thirty-seconds of an inch, both diameter and thickness. One boy each day stayed right with the hens



during these hours and as soon as an egg was laid it was examined. It was examined again in five minutes, then 15 minutes later, one hour after laid, 24 hours after laid, and 48 hours after laid. We found that most of the air cells did not start to form until one hour old, at least between the twenty-minute reading and one hour. We also discovered that some eggs, altho stored in the same jar as others, developed a larger air cell at the end of 24 hours. I had an idea that the blunt end of the egg was the most porous end of the egg. Mr. Hayden suggested we prick the shells of several on the small end to see if my theory that the porous shell caused the air cell to be formed on the big end was true. We tried this but in every case the air cell formed on the big end just as tho the small end had not been pricked. We still did not know the answers to all our questions, for the end of the term forced us to discontinue our work.

"We kept accurate records of the amount of feed consumed. Each bird averaged one-fourth pound of mash per day.

"The most serious difficulty we had in conducting this contest was the large number of broken eggs. At the start of the contest between 18 percent and 20 percent of all eggs laid were broken when they struck the wire floors. By adding two pounds of slaked lime to each hundred of feed we brought this breakage down to about 10 percent but it still remains one of the most serious problems we know of for the caged-layer poultryman. Another problem we had to solve was that of lice. We soon got rid of them by dusting each hen with sodium fluoride.

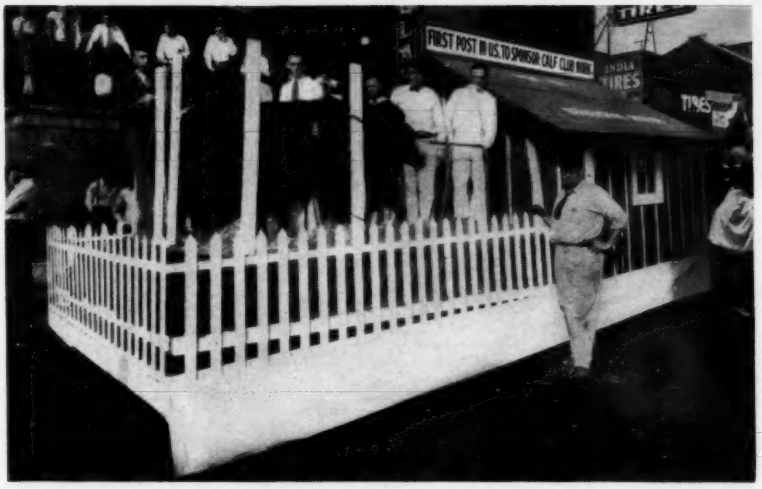
"Each boy in the chapter was willing to do his part in the feeding and care of the hens. I am sure all of us learned a great deal, and I know I found it very interesting work. The hens that laid the most and largest eggs were those hens that would score high on a utility score card. They had the better type, form, and showed the greatest development of bleaching. We had studied those things in class before but I never realized that bleaching and body type were so easy to detect until we put on this contest.

"One of the main reasons for conducting this contest was to get experience with the use of laying batteries. In summary I might say that they have many advantages and some disadvantages. The hens lay very well in these batteries. Many of these hens were laying every day when their sisters on the farm at home were not laying at all. Another advantage is that one can keep an accurate record on egg production. Feeding and watering do not have to be done at regular hours.

"The chief disadvantage is the large percent of broken eggs already mentioned. Perhaps this might be due, in part at least, to the fact that farmers entered their largest hens. These large hens would lay a big, heavy egg that had to drop a greater distance onto the wire floor."

Utah Band to Attend Tenth-Year Celebration

At the annual convention in August, Utah Future Farmers of America unanimously voted to send a one-hundred-piece band to the tenth-year convention of Future Farmers to be held in Kansas City in October, 1937. The state association also organized a senior unit of Future Farmers, which is to be identified with and which will operate under the constitution of the Future Farmers of America.



The American Legion, or at least the Warrensburg, Missouri, Post, is now sponsoring F.F.A. calf projects. A mammoth float showing this sponsorship paraded recently in the national convention of that body in St. Louis.

Two prize calves, fattened by Raymond and Edward Lowry of Leeton, Missouri, were featured in a barnyard representation and attracted much favorable attention during the eight-hour parade. Even following this ordeal, the calves, one Shorthorn and one Angus, sold for two cents above the top price on the St. Louis market.

Vocational Agriculture Work in Spotlight

M. J. FIELDS, Deputy State Superintendent, Huntsville, Texas

THE accompanying picture shows a group of teachers of vocational agriculture of southeast Texas, officials of the South Texas State Fair, two college professors, two supervisors, and visitors who participated in planning the educational booths and F.F.A. exhibits for South Texas State Fair.

Front row, left to right: Clyde Smith, assistant secretary of state; M. Blanchard, assistant secretary, South Texas State Fair; R. A. Shaw, district supervisor; O. O. Miller, teacher; Henry Ross, Professor of Agricultural Education; H. C. Ellis, teacher; Harris Campbell, teacher; J. W. Knight, teacher; L. G. Hilliard, teacher; D. M. Fairly, teacher.

Second row, left to right: C. Allen, a visitor; F. B. Sullivan, teacher; L. D. Self, superintendent of schools; Dan Lockey, teacher; L. H. Hampton, teacher; J. C. Green, teacher; L. B. Taylor, teacher; O. L. Ryall, teacher; S. C. Wilson, head of teacher training, Huntsville; H. W. Gardner, president of South Texas State Fair Association; G. L. Hart, teacher; Ray Gill, manager of Beaumont Chamber of Commerce; L. B. Herring, Jr., secretary-manager of South Texas State Fair.

Back row, left to right: C. F. Boyd, teacher; C. D. Ellison, teacher; V. E. Moore, teacher; J. C. Adams, teacher; B. A. Reid, teacher; C. D. Landolt, principal; C. W. Jackson, teacher; J. M. Blackwell, teacher; M. J. Fields, deputy state superintendent, Huntsville.

H. W. Gardner, president of the Fair Association, acted as toastmaster of the banquet meeting. L. B. Herring, Jr., secretary of the fair, outlined the provisions made available for the F. F.A. capon and swine exhibits. Prof. Henry Ross, Texas A. & M. College, presented a plan for the educational booths and F.F.A. project products exhibits and handled the program until plans were approved and the necessary decisions were made. One major farm problem was chosen as the central theme of the exhibits. Each school was given its assignment so that the work of planning each exhibit and assembling materials might be efficiently accomplished. M. J. Fields, deputy state superintendent, then presented the regulations and plans for an F.F.A. meat identification contest.

Other important features of F.F.A. Day included music furnished by the State F.F.A. Band, the members of which were entertained by the fair; six hundred caps given free to the boys to wear in a parade; and a capon auction of the boys' birds sponsored by the fair.

This is the fifth year that the fair has offered its encouragement to the vocational agriculture and F.F.A. programs. From a rather modest beginning the program has expanded until now an entire building is appropriated for this purpose and more than $1,000 in premiums is offered by the fair for this division. Fair visitors have manifested a keen interest in these exhibits, and the attendance in this building has materially increased each year.

Secretary Herring and President Gardner have become ardent champions of the F.F.A. and vocational agriculture programs and frequently attend the regular conferences of teachers of vocational agriculture. They persuaded the board of directors of the fair association, last spring, to hold a banquet jointly for the officials and directors of the fair and the teachers of vocational agriculture. The spirit of co-operation between the two agencies was certainly cemented at this banquet.

The writer has assisted in the vocational agriculture and F.F.A. programs at the South Texas State Fair since their beginning four years ago and has found public interest in the work extremely gratifying. The local, district, state, and national exhibitions offer excellent opportunities to present vocational agriculture and F.F.A. programs to the public and should be given strong emphasis thruout the United States, wherever these departments are to be found.

Building a Program of Work

(Continued from page 73)

imitation which has come from a heavy infiltration of the Hollywood film, the radio city broadcast, and the city newspaper.

In many rural high schools, courses in social science and political economics are offered, but as in most academic work the net result is factual rather than functional. Where these courses are offered it is suggested that the instructors of agriculture co-operate with teachers in bringing practical problems before the students. In his own class a study of the social setup of the home community and group conferences on the social program of the state and nation and their relation to agriculture may be suggested. Co-operation with other social leaders to foster development and avoid duplication is indicated. Experience which will enable a definite statement of methods in developing this ability is lacking, but we believe the ability itself is a necessary accomplishment of an educated farmer.

Summer Camp Activities

The Granite State Association of Future Farmers of America (New Hampshire) conducted a very successful summer camp for its members during the month of August. Representatives from 85 percent of the chapters were present during the camping period. The camp was under the direction of five teachers of agriculture who acted as Camp Councilors. The activities of the camp were strictly recreational with side trips to the Diamond Slash L Farm and hikes up Mt. Belknap.—Earl H. Little, State Supervisor.

Future Farmer Becomes Farm Manager

AFTER graduating from the vocational agriculture course at Marengo, Illinois, High School, in 1930, Vernon Hart applied for and received an agriculture scholarship at the Illinois Agriculture College. However, the depression came along, making him decide to work as a farm hand on account of a lack of funds. While working, he spent his spare time studying government bulletins and good farm magazines, and he attended the farmers' short courses at the local high school.

On April 1, 1932, Vernon accepted a position as herdsman to take full charge of a purebred Holstein herd. Here he made a good record. The following year his herd average was the highest among the four McHenry County cow testing associations. The herd of 18 cows averaged 14,372 pounds of milk and 458 pounds of butterfat per year, two of the best cows averaging 20,483 pounds of milk and 618 pounds of butterfat. One of the heifers made a new state record of 12,794 pounds of milk and 45 pounds of butterfat as a junior two-year-old in the advanced registry association. Another aged cow made as high as 105 pounds of milk per day and tested 3.5 percent. Eight of the cows on official test averaged between 700–940 pounds of fat. His herd was the first in the section to be tested clean for Bang's disease.

He kept his job as herdsman until November 1, 1933, when he was appointed manager of the entire farm of 290 acres at the age of 20 years. He reorganized the farm cropping system. He believes in building up the fertility of the land with limestone and rock phosphate. He plans to spread 50 tons of limestone each year. Last year he spread 20 tons of rock phosphate on 40 acres in preparation for alfalfa seeding. He intends to plow under 50 acres of sweet clover pasture each year. This year's cropping plan consists of 60 acres alfalfa hay and pasture, 30 acres soybeans, 30 acres oats seeded to sweet clover, 60 acres corn, 110 acres being left in permanent blue grass pasture.

The herd sire, Prince Ormsby Korndyke Boss, has full sisters that averaged between 700–900 pounds of butter with a test of 3.8 to 4 percent as two-year-olds. His daughters are now showing a great deal of improvement in production over their dams. Hart intends to practice some line breeding with these daughters. All the best bull calves are being raised to sell for breeding purposes. During the past six years over $5,000 worth of bulls have been sold. In the fall of 1933 Vernon took two bulls to the National Dairy Sale at Waukesha, Wisconsin. The 13-month-old bull brought the second highest price at the sale.

Vernon is but 22 years old and single. He has employed his father to help with the farm work, and his mother keeps house for him.

Mississippi Plans Big Fair

Four thousand F.F.A. members and vocational agriculture students from Mississippi participated in the Mid-South Fair, Memphis, Tennessee, and the Mississippi State Fair, Jackson, Mississippi. These boys paraded thru the streets and on the fair grounds.

Agricultural Education Program

San Antonio, Texas, December 2-5, 1936

All meetings will be held at the Plaza Hotel

COMMITTEE ON RESEARCH SUB-SECTION

Wednesday, 1:30 p. m., December 2

Chairman: R. M. Stewart, Professor of Rural Education, Cornell University, Ithaca, New York.

Panel Discussion: "Research Problems Suggested by a Curriculum Exhibit." Chairman, F. W. Lathrop, Research Specialist, Office of Education, Washington, D. C.

Members of Panel: Representatives from the four Regions.

Discussion.

TEACHER-TRAINERS SUB-SECTION

Wednesday, 3:00 p. m., December 2

Topic: Organizing Teacher-Training Programs to Meet New Conditions.

Chairman: L. D. Klemmedson, Department of Agricultural Education, College of Agriculture, Tucson, Arizona.

"The Cadet System of Training Vocational Agricultural Teachers." S. S. Sutherland, University Farm, Davis, California.

Discussion.

"The Development of Teacher-Training Programs Under the George-Deen Law." H. B. Swanson, Specialist in Teacher Training, Office of Education, Washington, D. C.

Discussion.

STATE SUPERVISORS SUB-SECTION

Wednesday, 3:00 p. m., December 2

Chairman: S. M. Jackson, State Supervisor of Agricultural Education, State Department of Education, Baton Rouge, Louisiana.

"Affiliated Membership in the F. F. A." W. A. Ross' Executive Secretary, F. F. A., Office of Education, Washington, D. C.

Discussion: "Five-Year Plans." (Each speaker to be allowed ten minutes.) J. E. Border, State Supervisor of Agricultural Education, Bozeman, Montana; E. B. Matthew, State Supervisor of Agricultural Education, Little Rock, Arkansas; J. A. Linke, Chief, Agricultural Education Service, Office of Education, Washington, D. C.; L. M. Sasman, State Supervisor of Agricultural Education, Madison, Wisconsin.

Discussion: "Official Travel of Agricultural Teachers." (Each speaker to be allowed fifteen minutes.) C. L. Angerer, Assistant State Supervisor of Agricultural Education, Jefferson City, Missouri; L. M. Sheffer, State Supervisor of Agricultural Education, Athens, Georgia.

TEN-YEAR TEACHER-TRAINERS BREAKFAST

Thursday, 7:30 a. m., December 3

President: Sherman Dickinson, Department of Agricultural Education, University of Missouri, Columbia.

Secretary: A. W. Nolan, Department of Agricultural Education, University of Illinois, Urbana, Illinois.

(Program announced at the meeting)

Thursday p. m., December 3

School Visitations and tours. Starting point, Plaza Hotel.

AGRICULTURAL EDUCATION SECTION

Friday, 9:00 a. m., December 4

Topic: Current problems.

Chairman: Roy A. Olney, Editor, Agricultural Education Magazine, Morgantown, West Virginia.

Presentation: "Planning State Programs Under the George-Deen Act."

In the Central Region, L. B. Pollum, State Supervisor of Agricultural Education, Topeka, Kansas.

In the Western Region, L. H. Humphreys, State Supervisor of Agricultural Education, Salt Lake City, Utah.

In the Southern Region, D. M. Clements, Regional Agent, Bureau of Education, Washington, D. C.

Discussion:

Developing Agricultural Conservation Thru Organized Instruction.

"The Contribution That Vocational Agriculture Can Make to Agricultural Conservation." I. W. Duggan, Principal Economist, Southern Region AAA.

"Servicing Teachers With Necessary Information." Professor W. G. Crandall, Department of Agricultural Education, Clemson College, South Carolina.

Discussion: Ways and Means of Teaching Agricultural Conservation.

Friday, 2:00 p. m., December 4

Topic: Current problems.

Chairman: J. B. Rutland, State Supervisor of Agricultural Education, Austin, Texas.

"Surveys of Opportunities." John B. McClelland, Department of Agricultural Education, Ohio State University, Columbus.

"Financing Young Farmers." R. H. Woods, State Director of Vocational Education, Frankfort, Kentucky.

"Building a Unified Program of Improvement of Teachers in Service." Professor V. G. Martin, Department of Agricultural Education, State College Station, Mississippi.

Discussion.

AGRICULTURE TEACHERS SUB-SECTION

Friday, 2:00 p. m., December 4

Chairman: C. B. Barclay, President, Texas Association of Teachers of Vocational Agriculture, Bryant, Texas.

"Vocational Agriculture Supervision Problems." Frank E. Wimberly, State Supervisor of Agricultural Education, State College, New Mexico.

"Teacher Training in Vocational Agriculture." Roy L. Davenport, Director, School of Vocational Education, Louisiana State University, Baton Rouge.

"Trends in Agricultural Education." D M. Clements, Federal Agent for Agricultural Education, Office of Education, Washington, D. C.

Discussion.

AGRICULTURAL EDUCATION SECTION

Saturday, 9:00 a. m., December 5

Topic: Possibilities for Research Thru a National Study of the Secondary Curriculum for Agriculture.

Chairman: R. M. Stewart, Department of Rural Education, Cornell University, Ithaca, New York.

Statement by the Chairman of the Research Committee.

"Evidences from Curriculum Researches of the Need for Further Studies." Carsie Hammonds, Department of Agricultural Education, University of Kentucky, Lexington.

Outstanding Features of the Curriculum Exhibit.

Summary Statement, Dr. F. W. Lathrop, Office of Education, Washington, D. C.

"Looking Ahead in Agricultural Education" (a report of the Committee on Policies). A. K. Getman, State Supervisor of Agricultural Education, Albany, New York.

The Agricultural Education Magazine, R. A. Olney, Editor, Morgantown, West Virginia; W. F. Stewart, Business Manager, Ohio State University, Columbus.

Business meeting.

AGRICULTURE TEACHERS SUB-SECTION

Saturday, 9:00 a. m., December 5

Chairman:

"Some Problems of Future Farmer Advisors." Claude Fry, President, Illinois Association of Teachers of Vocational Agriculture, Polo, Illinois.

"The Future of Education in Agriculture." E. J. Kyle, Dean, School of Agriculture, A. & M. College of Texas, College Station, Texas.

"Developing Programs of Supervised Practice in Farming." S. V. Burks, Teacher of Vocational Agriculture, Poteet, Texas.

Discussion.